

Amendments to the Specification:

Replace the table beginning on page 30 with:

Vessel Diameter (mm)	Graft Diameter (mm)	Stent Apices/Side (Distal-most Stent #)
19	22	[[5(6)]] 5(5)
20-21	24	[[5(6)]] 5(5)
22-23	26	[[5(6)]] 5(5)
24-25	[[27]] 28	5(6)
26-27	30	5(6)
28-29	32	6(7)
30-31	34	6(7)
32-33	36	6(7)
34	38	6(7)
35-36	40	7(8)
37-38	42	7(8)
39-40	44	7(8)
41-42	46	7(8)

Table 1

Replace the paragraph beginning on page 31, line 6, with:

--The preferred configuration for the radius of curvature α of the distal apices 34 is substantially equal to the radius r of the proximal 22 and distal 24 apices of the stent 20, in particular, it is equal at least to the radius of curvature r of the proximal apices of the stent 20 directly adjacent the bare stent 30. Thus, as shown in FIG. 8, a distance between the proximal apices 22 of the most proximal stent 23 and crossing points of the exposed portions of the bare stent 30 are substantially at a same distance from one another all the way around the circumference of the proximal end 12 of the graft sleeve 10. Preferably, this distance varies based upon the graft diameter. Accordingly, the sinusoidal portion of the distal apices 34 connected to the graft sleeve 10 traverse substantially the same path as that of the stent 23 closest to the bare stent 30. Thus, the distance d between the stent 22 and all portions of the bare stent 30 connected to the graft sleeve 10 remain constant. Such a configuration is

advantageous because it maintains the symmetry of radial force of the device about the circumference of the vessel and also aids in the synchronous, simultaneous expansion of the device, thus increasing apposition of the graft material to the vessel wall to induce a proximal seal -- and substantially improve the proximal seal -- due to increasing outward force members in contact with the vessel wall. Inter-positioning the stents 23, 30 in phase with one another, creates an overlap, i.e., the apices 34 of the bare stent 30 are positioned within the troughs of the stent 23. A further advantage of such a configuration is that the overlap provides twice as many points of contact between the proximal opening of the graft 10 and the vessel in which the stent graft 1 is implanted. The additional apposition points keep the proximal opening of the graft sleeve 10 open against the vessel wall, which substantially reduces the potential for endoleaks. In addition, the overlap of the stents 23, 30 increases the radial load or resistance to compression, which functionally increases fixation and reduces the potential for device migration.

In contrast to the distal apices 34 of the bare stent 30, the radius of curvature β of the proximal apices 32 (those apices that are not sewn into the graft sleeve 10) is significantly larger than the radius of curvature α of the distal apices 34. A preferred configuration for the bare stent apices has a radius approximately equal to ~~[[1.5]]~~ 1.3 mm for the proximal apices 32 and approximately equal to 0.5 mm for the distal apices 34. Such a configuration substantially prevents perforation of the blood vessel by the proximal apices ~~[[34]]~~ 32, or, at a minimum, makes is much less likely for the bare stent 30 to perforate the vessel because of the less-sharp curvature of the proximal apices ~~[[34]]~~ 32.--

Replace the paragraph beginning on page 44, line 16, with:

--The distal sleeve 644 is fixedly connected to the distal end of the graft push lumen 642, which lumen 642 provides an end face for the distal end 14 of the stent graft 1. Alternatively, the distal sleeve 644 can be removed entirely. In such a configuration, as shown in FIG. 12, for example, the proximal taper of the inner sheath 652 can provide the measures for longitudinally holding the compressed distal end of the graft 1. If the sleeve 644 is removed, it is important to prevent the distal end 14 of the stent graft 1 from entering the space between the interior surface of the hollow sheath lumen 654 and the exterior surface of the graft push lumen 642 slidably disposed in the sheath lumen 654. Selecting a radial thickness of the space to be less than the diameter of the wire making up the stent 20, 30 (in particular, no greater than half a diameter thereof) insures reliable movement of the distal end 14 of the stent graft 1. As set forth in more detail below, each apex 32 of the bare stent 30 is, then, loaded into the apex capture device 634 so that the stent graft 1 is held at both its proximal and distal ends. The loaded distal end 14, along with the distal sleeve 644 and the graft push lumen 642, are, in turn, loaded into the inner sheath 652, thus, further compressing the entirety of the stent graft 1. The captured bare stent 30, along with the nose cone assembly 630 (including the apex capture device 634), is loaded until the proximal end of the nose cone 632 rests on the distal end of the inner sheath 652. The entire nose cone assembly 630 and sheath assembly 650 is, then, loaded proximally into the rigid outer catheter 660, further compressing the stent graft 1 (resting inside the inner sheath 652) to its fully compressed position for later insertion into a patient. See FIG. 63.--

Replace the paragraph beginning on page 62, line 6, with:

-- The apex clasp device is unique to the present invention in that it incorporates features that allow the longitudinal forces subjected on the stent graft 1 to be fully supported, through the bare stent 30, by both the guidewire lumen 620 and apex release lumen 640.

Support occurs by providing the distal apex head 636 with a distal surface 639 -- which surface 639 supports supporting the proximal apices 32 of the bare stent 30, which is particularly (shown in the enlarged perspective view of the distal apex head 636 provided in FIG. 29). The When captured, each proximal apex 32 of the bare stent 30 rests on a distal surface 639, in turn, rests on the proximal apex body 638 when in the closed position, as more clearly shown in FIGS. 30 and 31. The proximal spokes of the distal apex head 636 slide within the fingers of the proximal apex body 638 as one part moves with respect to the other part. A slight space, therefore, exists between the fingers and the outer circumferential surfaces of the spokes. To insure that the bare stent 30 does not enter this space (which would prevent a proper release of the bare stent 30 from the apex capture device 634, a radial thickness of the space must be less than the diameter of the wire making up the bare stent 30. Preferably, the space is no greater than half a diameter of the wire. Thus, the longitudinal forces are fully transmitted to both the guidewire lumen 620 and apex release lumen 640, making the assembly much stronger.--

Replace the paragraph beginning on page 62, line 16, with:

--Having the distal surface 639 be the load-bearing surface of the proximal apices 32 ensures expansion of the each one of the distal apices 32 from the apex release assembly 690. The proximal surface 641 of the distal apex head 636 meets with the interior surfaces of the proximal apex body 638 to help carry the apex load because the apices of the bare stent 30 are captured therebetween when the apex capture device 634 is closed. Such capture can be clearly seen in the cut-away view of the proximal apex body 638 in FIG. 31. For release of the apices 32 of the bare stent 30, the proximal apex body 638 moves to the left (with respect to FIG. 32). Because of friction occurring between the apices 32 and the "teeth" of the proximal apex body 638 when the apices 32 are captured, the apices 32 will also try to move

to the left along with the proximal apex body 638 and, if allowed to do so, possibly would never clear the "teeth" to allow each apex 32 to expand. However, as the proximal apex body 638 disengages (moves in the direction of arrow C in FIG. 31), direct contact with the distal surface 639 entirely prevents the apices 32 from sliding in the direction of arrow C along with the proximal apex body 638 to ensure automatic release of every captured apex 32 of the bare stent 30. Because the proximal apex body 638 continues to move to the left, eventually the "teeth" will clear their respective capture of the apices 32 and the bare stent 30 will, therefore, expand entirely. The release position of the distal apex head 636 and the proximal apex body 638 is shown in FIG. 32, and corresponds to the position of the apex release assembly 690 in FIG. 17. As can be seen, tapers on the distal outer surfaces of the proximal apex body 638 further assist in the prevention of catching the proximal apices 32 of the bare stent 30 on any part of the apex capture device 634. In this configuration, the distal surfaces 639 bear all of the load upon the bare stent and the fingers of the proximal apex body 638 provide the restraining of the bare stent 30 to insure reliable release when the proximal apex body 638 is moved proximally.--